

CLAIMS:

What is claimed is:

1. An apparatus for forming an electronic assembly comprising:
 - a first tube having a first end and a second end;
 - a compression device, coupling to said first tube, said device pulsates at least one block, said block having an integrated circuit thereon is dispensed in a slurry flowing through a portion of said first tube; and
 - a second tube connected to said first tube to deliver said slurry to said first tube.
2. An apparatus as in claim 1, said device controls a rate for dispensing blocks over recessed regions in a substrate.
3. An apparatus as in claim 1, wherein said slurry is dispensed onto a substrate from said second end.
4. A method for dispensing a plurality of blocks over a substrate comprising:
 - pulsating a fluid flowing in a first tube coupling to a compression device that pulsates said fluid;

dispensing a plurality of blocks from a second tube into said fluid, each of said plurality of blocks has an integrated circuit; and

while pulsating said fluid, dispensing said blocks and said fluid over a substrate having a plurality of receptor sites wherein said plurality of blocks couples to said receptor sites on said substrate.

5. An apparatus as in claim 4, said compression device controls a rate for said dispensing said plurality of blocks over said receptor sites.

6. An apparatus comprising:

a block clearing device having a nozzle head having at least one nozzle head for allowing a fluid to pass therethrough; and

at least one vacuum pump coupling to said nozzle head through at least one tube wherein said vacuum pump causes slurry having a plurality of blocks dispersed in a fluid to move into said nozzle head wherein said nozzle head clears excess blocks off a substrate.

7. An apparatus as in claim 6 wherein said nozzle head further comprises a low vacuum channel and a high vacuum channel.

8. An apparatus as in claim 7 wherein a pressure ranging from about 0.01 psi to 0.5 psi is applied to said high vacuum channel and another pressure ranging from about 0.50 psi to 0.80 psi is applied to said low vacuum channel.
9. An apparatus as in claim 7 wherein a pressure is applied to said low vacuum channel to lift said excess blocks off said substrate and another pressure is applied to said high vacuum channel to remove said excess blocks off said substrate.
10. An apparatus as in claim 6 further comprising:
- a dispensing device to dispense said slurry onto a substrate having a plurality of receptor sites to receive said plurality of blocks; and
 - a pulsating device coupling to said dispensing device to pulsate said slurry while said dispensing device dispenses said slurry onto said substrate.
11. An apparatus as in claim 6 wherein said vacuum pump includes a filter coupling thereto, said filter prevents said at least one block from entering said vacuum pump.
12. An apparatus as in claim 6 further comprising a container wherein said excess blocks removed from said substrate by said block clearing device are stored..

13. A method for moving a plurality of blocks comprising:

removing excess blocks off a substrate with a block clearing device wherein said block clearing device couples to at least one vacuum pump which applies a pressure to a nozzle head included within said block clearing device wherein said excess blocks are sucked into said nozzle when said pressure is applied.

14. A method as in claim 13 wherein said nozzle head further comprises a low vacuum channel and a high vacuum channel wherein a low vacuum pressure is applied to said low vacuum channel and a high vacuum pressure is applied to said high vacuum channel.

15. A method as in claim 14 wherein a pressure ranging from about 0.01 psi to 0.5 psi is applied to said high vacuum channel and another pressure ranging from about 0.50 psi to 0.80 psi is applied to said low vacuum channel.

16. A method as in claim 14 further comprising:

applying said low vacuum pressure to said low vacuum channel to lift said excess blocks off said substrate; and

applying said high vacuum pressure to said high vacuum channel to remove said excess blocks off said substrate.

17. A method as in claim 13 further comprising:

pulsating a dispensing device that dispenses a slurry comprising a plurality of blocks wherein said slurry include said excess blocks while dispensing said plurality of blocks over a substrate having a plurality of receptor sites to receive said plurality of blocks.

18. An apparatus comprising:

a block clearing device having a container for holding a fluid;

a compression device coupling to said block clearing device; and

an nozzle coupling to said container, said nozzle releases said fluid over a substrate having a plurality of blocks being dispensed thereto wherein said compression device causes said fluid to pulsate as said fluid is released, said fluid clearing excess blocks off said substrate.

19. An apparatus as in claim 18, wherein said compression device causes said container to jet out said fluid at a variable rate to remove said excess blocks off said substrate.

20. An apparatus as in claim 18, wherein said compression device causes a flow rate of said fluid to rapidly change within a local area between said fluid flow and said substrate.

21. An apparatus as in claim 18 further comprising:

a dispensing device to dispense a slurry having said plurality of blocks onto said substrate, said substrate further having a plurality of receptor sites to receive said plurality of blocks; and

a pulsating device coupling to said dispensing device to pulsate said slurry while said slurry is being dispensed onto said substrate.

22. A method for moving a plurality of blocks comprising:

removing excess blocks off a substrate having a plurality of blocks being dispensed thereto with a block clearing device, said block clearing device comprising a fluid container and a compression device, wherein said fluid container releases a fluid to over said substrate while said compression member causes said fluid to pulsate as said fluid is being released.

23. A method as in claim 22 wherein said removing excess blocks off said substrate includes alternately jetting out and taking in said fluid to create a net flow rate of approximately zero.

24. A method as in claim 22 further comprising:

using a dispensing device and dispensing a slurry having said plurality of blocks over said substrate, said substrate further having a plurality of receptor sites to receive said plurality of blocks; and

while dispensing said slurry, pulsating said slurry.

25. An apparatus for processing a plurality of blocks having integrated circuits disposed thereon comprising:

a first process chamber; and

a second process chambers connected through a transferring line to said first process chamber wherein said plurality of blocks with integrated circuits thereon and a fluid are moved from said first process chamber to said second chamber through said transferring line by a pressure regulation mechanism.

26. An apparatus as in claim 25, wherein at least one block of said plurality of blocks is cleaned in said first process chamber.

27. An apparatus as in claim 25, wherein at least one block is treated in said second process chamber.

28. An apparatus as in claim 25, wherein said first chamber is selected from a group consisting a recovering station, a recycling station, a dispensing station, and a cleaning station.
29. An apparatus as in claim 25, wherein said second chamber is selected from a group consisting of a recovering station, a recycling station, a dispensing station, and a cleaning station.
30. A method comprising:
- moving a slurry from a first process chamber to a second process chamber using a pressure regulation mechanism, said slurry comprising a plurality of blocks dispensed in a fluid, each of said plurality of blocks having integrated circuits disposed thereon; and
- performing an action on at least one block, said action is one of cleaning said at least one block or treating said at least one block.
31. A method as in claim 30 further comprising cleaning at least one block of said plurality of blocks in said first process chamber.
32. A method as in claim 30 further comprising treating at least one block of said plurality of blocks in said second process chamber.

33. A method as in claim 30, wherein said first chamber is selected from a group consisting a recovering station, a recycling station, a dispensing station, and a cleaning station.

34. A method as in claim 30, wherein said second chamber is selected from a group consisting of a recovering station, a recycling station, a dispensing station, and a cleaning station.

35. An apparatus for forming an electric assembly comprising:

a dispensing tube having a plurality of orifices located longitudinally along a surface of said dispensing tube; and

a vibration source compiling to said dispensing tube; wherein

a plurality of blocks are dispensed from said plurality of orifices and wherein said vibration source facilitates even distribution of said plurality of blocks along said dispensing tube.

36. An apparatus as in claim 35 wherein said vibration source produces frequencies ranging from 2HZ to 2000 HZ.

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37. An apparatus as in claim 35 wherein said plurality of orifices has sizes and shapes configured to match said plurality of blocks.
 38. An apparatus as in claim 35 wherein said plurality of orifices has a first pattern matching a second pattern of a plurality of receptor sites on a substrate that is configured to receive said plurality of blocks.
 39. An apparatus as in claim 35 further comprising a rotation mechanism compiling to each side of said dispensing tube wherein said rotation mechanism rotates said dispensing tube.
 40. An apparatus as in claim 39 wherein said rotation mechanism rotates said dispensing tube from a 0-degree position to a 90-degree position.
 41. An apparatus as in claim 39 wherein said rotation mechanism rotates said dispensing tube such that when said plurality of blocks is being dispensed said plurality of orifices passes downward and directly above a substrate.

42. An apparatus as in claim 39 wherein said rotation mechanism rotates said dispensing tube such that said plurality of orifices points in a direction away from a substrate when said plurality of blocks are not to be dispensed onto said substrate.
43. An apparatus as in claim 35 wherein said vibration source controls when said plurality of blocks are dispensed onto said substrate.
44. An apparatus as in claim 35 further comprises a transfer chamber located inside said dispensing tube wherein a fluid is pumped in and out of said transfer chamber.
45. An apparatus as in claim 44 wherein an inlet tube is disposed into a first end of said transfer chamber and an outlet tube is coupled to a second end of said transfer chamber, where a slurry having said plurality of blocks dispensed in said fluid is pumped into said transfer chamber through said inlet tube and excess fluid is poured out of said transfer chamber through said outlet tube.
46. An apparatus as in claim 45 wherein a filter is further compiled to said outlet tube, said filter prevents said plurality of blocks from being removed out of said transfer chamber with said excess fluid.

47. A method for dispensing a plurality of blocks over a substrate comprising:

dispensing a slurry having said plurality of blocks and a fluid into a dispensing tube having a plurality of orifices;

vibrating said slurry using a vibration source coupling to said dispensing tube while dispensing said plurality of blocks to a substrate having a plurality of receptor sites to receive said plurality of blocks, said plurality of blocks are dispensed through said plurality of orifices.

48. A method as in claim 47 wherein said vibration and said slurry comprises said vibration source vibrating said slurry with frequencies ranging from 2HZ to 2000 HZ.

49. A method as in claim 47 further comprising rotating said dispensing tube using a rotation mechanism compiling to each side of dispensing tube.

50. A method as in claim 49 wherein said rotating includes rotating said dispensing tube from a 0-degree position to a 90-degree position.

51. A method as in claim 49 wherein said rotating includes rotating said dispensing tube such that said plurality of orifices face downward and directly above said substrate to dispense said plurality of blocks.

52. A method as in claim 49 wherein said rotating includes rotating said dispensing tube such that said plurality of orifices face away from said substrate to stop dispensing said plurality of said blocks over said substrate.

53. A method as in claim 47 further comprising:

dispensing said slurry into a transfer chamber located within said dispensing tube through an inlet tube disposed into a first end of said transfer chamber;

removing excess fluid from said slurry from said transfer chamber through an outlet tube coupled to a second end of said chamber using a vacuum source compiling to said outlet tube and turning off said vacuum source to distribute said plurality of blocks over said plurality of orifices.

54. A method as in claim 47 further comprising:

turning on and off said vibration source to control said dispensing a slurry wherein when said vibration source is turned on, said slurry is being dispensed and wherein when said vibration source is turned off, said slurry is not being dispensed.